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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/682,995	11/06/2001	Bang Mo Kim	RD-27684	4683

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EXAMINER

GAKH, YELENA G

ART UNIT PAPER NUMBER

1743

DATE MAILED: 05/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/682,995	Applicant(s) KIM ET AL.	
	Examiner Yelena G. Gakh, Ph.D.	Art Unit 1743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. RCE, Amendment and Response filed on 05/05/04 are acknowledged. Claims 1-28 are pending in the Application. Claims 29-67 are cancelled.

Specification

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention

The specification is objected to as not being written in such full, clear, concise and exact terms as to enable anyone of ordinary skill in the art to practice the invention in its best mode. The specification indicates that a Waste Reduction module “predicts, or estimates, process parameters that may reduce wastes produced by the industrial process”; however, no disclosure is given on how this Waste Reduction module really works, and how the processes can be optimized for all possible industrial processes with outputs of multiple hazardous materials. It is not clear, how the Waste Reduction module treats information from different sources even for the same process, e.g. if it integrates all information independent on particular capabilities of a specific plant, etc. No working model for any of such process is disclosed and no examples demonstrating how such model can be used for predicting parameters to be optimized for reducing the wastes are represented. It is even less clear as to how the Waste Reduction module can handle multiple models for multiple processes using data from multiple sources, when the multiple sources (e.g. plants) for even the same process have their own specific capabilities, or when there are multiple processes leading to the same waste materials? Would it be an optimization of the parameters for a specific process for a specific plant, or for all plants employing such process?

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The Breath of the Claims

The scope of claims is the broadest possible, as the claims recite globalization of collecting data on wastes of any possible industrial process (with exception of claim 9, which recites producing specific compounds) and decreasing these wastes by some undisclosed process model which allows reducing these wastes.

The Nature of the Invention

The invention is drawn to "a method of reducing wastes". However, no actual methods or ways of reducing wastes are disclosed in the specification. The disclosure is related to collecting and distributing information regarding industrial processes. No reasonable suggestions or guidance on how to use this information for reducing the wastes are given in the specification. The possible process models for reducing wastes on the basis of collected data on wastes are not disclosed in the specification, even for particular wastes recited in claim 9.

The State of the Prior Art and the Level of Predictability in the Art

The prior art discloses monitoring hazardous and toxic waste using corresponding detectors, and collecting information from various locations on the central processor, as e.g. in

Art Unit: 1743

Bell (US 4,867,604), Speranza (US 5,206,818), Carew (US 5,325,605), Taylor (US 5,373,160 and 5,451,787), Malone (US 5,425,316), Stedman et al. (US 5,498,872), Embutsu et al. (US 5,699,525) Jaidka (US 5,606,495), Orr et al. (US 5,808,916, Izumi et al. (JP 403001699 A), Nishi et al. (JP02001114402 A) and Elokhin (RU 2147137 C1); or it discloses methods of reducing wastes by employing corresponding physical and chemical processes for destroying wastes, as disclosed by e.g. Gloster et al. (US 3,810,542), Von Klenck (US 3,859,933), Chappell (US 3,963,637), Falbesaner et al. (US 4,234,422) and DE 29912126U1. The prior art does not predict the ways of reducing wastes by collecting information on the output of industrial process and transforming it through the local or global network. The prior art does not predict collecting information from different plants located in different countries (even producing the same waste), applying a uniform model for reducing these wastes with the following feedback to each plant on the way to reduce the wastes for this particular plant. The prior art does not predict a reasonable success for developing such model, although the idea of reducing wastes on the basis of collecting data on such wastes from industrial processes is trivial and obvious.

The Level of One of Ordinary Skill

There is no one of ordinary skill in the art who is capable of developing a model, enabling transformation of global information on wastes produced by different plants in different countries, which may include more than one pollutant, into the possible ways of reducing the wastes for each specific plant, even if the industrial process yielding the wastes is well known in the art.

The Amount of Direction Provided by the Inventor

The inventors do not provide any direction on how such model can be developed, except for a general description of an imaginary process of collecting data with "Waste Reduction module", which somehow can transform these data using another imaginary industrial process model to provide reduction of the wastes, and desirably - for each specific plant.

The Existence of Working Examples

No working examples for the claimed method are represented in the specification. The drawings, which are supposed to illustrate specific embodiments of the invention, are just general schemes of a desirable process, which is neither adequately disclosed in the specification, nor represented by the specific examples.

Disclosing various brands of microprocessors, which are available on the market, is not the same as disclosing the "Waste Reduction module", which remains a "black box", magically transforming global data on global wastes in the world into the model processes, which allow reducing these wastes.

The method claimed is not enabled by the disclosure and therefore cannot be used by anyone of ordinary skill in the art.

5. Claims 25-28 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The specification does not disclose how it is possible to acquire process information concerning industrial process from a globally distributed computing network, with information concerning specific parameters, such as concentration of chemical species used in the process, pollutants emitted by the process, flow rates, etc., when these parameters are closely related to the production scales of the plants and can be very specific for a given plant. The specification does not disclose, how it is possible to gather information globally – is it gathered from all possible plants employing a specific process? How should this information be represented – specifically for each plant, as an average number, as a total sum for all plants, etc.? The specification does not enable anyone of ordinary skill in the art to practice the method the way it is disclosed, as no ways for presenting such information, as well as no specific description of what this information should be, are indicated in the specification.

Response to Arguments

6. Applicant's arguments filed 05/05/04 have been fully considered but they are not persuasive. The disclosure of the instant application is drawn to a very general model of managing wastes from various industrial processes, involving global network, which supposedly relates to all possible industrial processes producing wastes in the world. While the general concept of the application, i.e. correlating amounts of wastes of various industrial processes with processes parameters followed by adjusting the parameters in order to reduce wastes, is quite clear and obvious, realization of such concept remains vague and non-enabled. Figure 3 is represented in the Applicants' arguments as describing "specific embodiments", enabled by the disclosure. However, the drawing gives only a very general scheme of managing solid, liquid and gaseous wastes, with no description of how to utilize this scheme in practice. A small portion of the plethora of references provided by the examiner demonstrates complexity of monitoring even specific industrial processes related to wastes and their control, with no indication of how such monitoring and controlling of wastes can be unified into a global managing system. The instant disclosure does not give any guidance of how the general concept of managing wastes in a global scale, being obvious on its own, can be realized in practice, which makes the claimed method not enabled by the specification.

The arguments regarding specifically the "Waste Reduction module" are not convincing. If the Applicants state that such modules are well known in the art, then it is not clear, as to what is claimed as the Applicants' invention in the instant case. If the Applicants state, that the types of "Waste Reduction modules" are known only for specific processes, rather than for "global" processes yielding wastes, then the specification lacks disclosure on how these modules can be unified in one system for different industrial processes, different wastes and different plants from different countries. The way the "Waste Reduction module" works is a quintessence of the claimed invention, and cannot be ignored, contrary to what is stated by the Applicants.

Art Unit: 1743

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yelena G. Gakh, Ph.D. whose telephone number is (571) 272-1257. The examiner can normally be reached on 9:30 am - 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on (571) 272-1267. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Yelena G. Gakh
May 5, 2004

Handwritten signature of Yelena G. Gakh in black ink.